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Session 6: Machine learning and infrastructure

Title: Exascale Computing for Meteorology

Exascale computing capabilities will enable meteorological agencies to substantially increase the fidelity of their NWP modeling systems and answer challenging science questions that require more computing capability than they've had to date. But as we enter the Exascale era, we're at a time of rapid external change driven by new capabilities of generative AI and large language models.

What will the impact of this change be on the meteorology community? In a time of rapid change and volatile energy and component costs, it is critical that applications be architected to maximize agility, so that centers can choose solutions that provide the best value for their budgets and systems will need to be architected for a mixed workload that may change over the typical lifespan of an HPC system.